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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/755,478

01/13/2004

Atsushi Oohashi

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01/27/2005

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EXAMINER

MULLINS, BURTON S

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/755,478

Applicant(s)

OOHASHI, ATSUSHI

CAW

Examiner

Burton S. Mullins

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 6 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on 13 January 2004 has been considered by the examiner.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashino et al. (US 6,486,586) in view of Umeda (US 6,181,045). Higashino teaches an alternator stator comprising: an annular stator core 15 in which a large number of slots 15a having grooves lying in an axial direction are formed in a circumferential direction so as to open onto an inner circumferential side (Figs.2&3); and a stator winding 16 installed in said stator core, with strands 30 formed by coating an electrically insulating coating onto a metal wire (copper) material (c.4, lines 23-24), and joint portions (return portions) 30a between said

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end portions of said base strands being arranged into at least one row in a circumferential direction (Fig.2), wherein a first electrically-insulating layer (epoxy resin) 102 is formed so as to cover each of said joint portions 30a and to bridge a pair of said joint portions that is adjacent in at least one direction selected from a group including a radial direction and a circumferential direction (Fig.3), a second electrically-insulating layer (varnish) 103 is formed so as to cover said first electrically-insulating layer 102 and extend to said electrically-insulating coating of said end portions of said base strands (Fig.3), and said first electrically-insulating layer has a modulus of elasticity that is larger than a modulus of elasticity of said second electrically-insulating layer, i.e., the second layer 103 of varnish, which promotes rigidity (c.4, lines 63-67), is more rigid than the first layer 102 of epoxy resin.

Higashino differs in that the stator winding conductor strands 30 are continuous and do not comprise "a plurality of winding sub-portions constructed by installing base strands in said slots at intervals of a predetermined number of slots so as to alternately occupy an inner layer and an outer layer in a slot depth direction and welding end portions of said base strands."

Umeda teaches an alternator stator with plural winding sub-portions comprising U-shaped conductor strands 61 with base portions comprising inner-layer and outer-layer side conductors 61g and 61f (Fig.7) which are installed in slots at intervals and welding end portions of the base strands (c.9, lines 9-16). Use of the U-shaped segments improves manufacture since it is easy to process the conductors into the desired shape and the bridge portions may be made without special jigs (c.9, lines 47-53).

It would have been obvious to one of ordinary skill in the art to modify Higashino and provide plural winding sub-portions per Umeda since this would have improved manufacturing efficiency.

Regarding claims 2 and 4, the varnish second layer 103 bridges at least radially-adjacent joint portions in Higashino (Fig.3).

Regarding claim 3, since the copper conductors 30 comprise an insulation coating, the first epoxy resin layer extends to the coating as seen in Higashino, Fig.3.

Regarding claims 7-8, see Umeda, who teaches both U-shaped and continuous conductor manufacturing methods.

#### *Allowable Subject Matter*

5. Claims 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art, in particular Higashino, does not teach a second layer comprising silicone (claim 6) or an additional cap covering the second layer formed on the joint portions between the end portions of continuous conductor wires (claim 9).

#### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029.

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The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Burton S. Mullins  
Primary Examiner  
Art Unit 2834

bsm  
24 January 2005